



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RB AN8514-1-3
Job Sheet 171363



Part No: RB AN8514-1-3

Job Qty: 6 ea

Part Name: Bolt



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/31/18

Job Tracking No:

Due Date: 2/2/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG RB AN8514-1 Rev 4 IPP Rev A 18.01.18 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	6 Ea		2/1/18	0.00	0.00	Start Up Machining		JL 18-3-6
120	Mori Seiki	6 pcs		2/2/18	0.00	1.50	MORI SL-154		JL
130	QC	6 pcs		2/2/18	0.00	0.00	QC2		JL
140	QC	6 pcs		2/2/18	0.00	0.00	QC8		J.C. - L. 18-03-06
170	Outsource	6 pcs		2/2/18	0.00	0.00	Outsource12		AT 18/03/18
180	Packaging	6 pcs		2/2/18	0.00	0.00	Packaging2		AT 18/03/18
190	QC	6 pcs		2/2/18	0.00	0.00	QC6		38
200	Packaging	6 pcs		2/2/18	0.00	0.00	Packaging3		MAR 20 2018
210	QC21-SA	6 Ea		2/2/18	0.00	0.00	QC21		GA 21 MAR 21 2018

Part Op 120 - 1-Machine as per folio FB779 FOLIO REV: _____ DWG REV: _____ 2-Deburr
Descriptions: 170 - -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C
Conformity is required

P/O: 39245

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4.75

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
MT-4140QT-R0.500	AISI 4140 Quenched & Tempered Steel Round Bar 0.500" Dia.	.2400 ft (.04 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	MT-4140QT-R0.500	0	0	0

S048086

-17

Part Specifications

d not be found.

Plex 1/31/18 11:09 AM Dart.lajeunesse.marie



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S048086



Part: RB AN8514-1-3

Job No: 171363

Serial No/Batch: S048086

Revision: 4

Inspector:

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

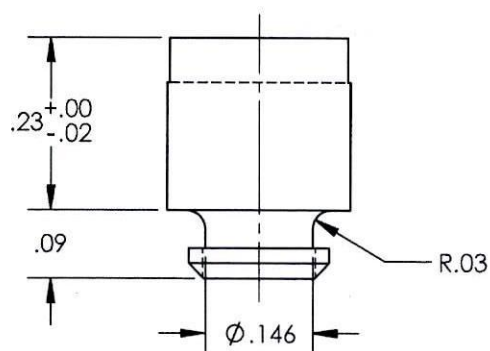
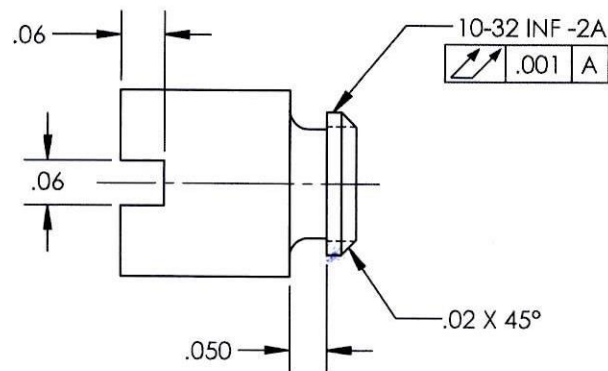
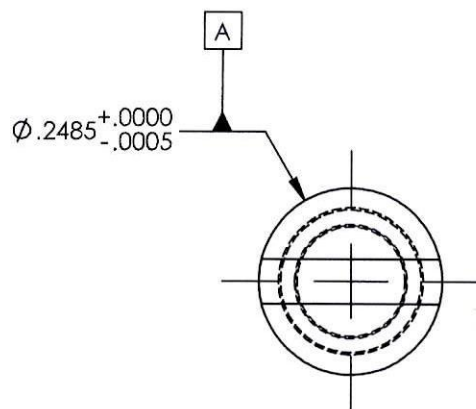
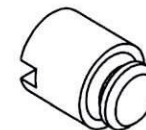
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
4	16-0046	-3 CH'D MAT'L WAS 4140 Q&T IS 4140/4142 Q&T, CH'D DIM WAS .090 IS .09, WAS R.025 IS R.03.	3/1/2016	RJC	JAG



(-3)
BOLT

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 170758 M.L.S

18-01-19

DART AEROSPACE	
TITLE ADJUSTABLE SPANNER WRENCH	
DWG NO. RB AN8514-1-3	REV 4
MAT'L 4140/4142 Q & T	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH BLACK OXIDE	.XX ± .01 ANGLES ± 5°
SPEC QMSI-6.2.2 REV D	.X ± .1 SURFACES = 125/
DRAWN BY: COLE	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: DUERFELDT	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	BELL 212, 230, 407, 412, 430
SCALE 4:1	DATE 6/26/2000
SHEET 3 OF 5	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

DART AEROSPACE LTD		Work Order:	17058
Description: Bolt		Part Number:	RB AN8514-1-3
Inspection Dwg: RB AN8514-1-3		Rev: 4	Page 1 of 1

INSPECTION SHEET

[illegible]

Measured by:	jk	Checked by:	JL-L	QC Inspector:	
Date:	18-36	Date:	18-03-06	Date:	

Engineering Approval: (If necessary)		Date:	
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Rev	Date	Change	Revised by	Approved
A	14.07.31	New Issue	KJ	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO039245

Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

PO No: PO039245
PO Date: 3/8/18
Due Date: 3/14/18
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Phone:

E-MAILED

MAR 12 2018

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pynt Terms: Net 30
Freight Terms:
Special Comments: part are RUSH please advise delivery

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	172459	RBE350A94-3700-A-03	Top -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	3/14/18	9 pcs 16	0 pcs 16x	9 pcs AT 18/03/18	\$4.4444/pcs	\$40.00
2	170561	RBE-350DAMPER	Damper Spanner Wrench -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	3/14/18	6 pcs 6x	0 pcs	6 pcs AT 18/03/18	\$4.4444/pcs	\$26.67
3	171155	RBE350A94-2708-01-15	Rod Assembly -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13964, CLASS 1; MIL-C-16173 GRADE 4 -Certificate of Conformity is required	Firmed	3/14/18	6 pcs 6x	0 pcs	6 pcs AT 18/03/18	\$4.4444/pcs	\$26.67
4	171363	RB AN8514-1-3	Bolt -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	3/14/18	6 pcs 6x	0 pcs	6 pcs AT 18/03/18	\$4.4444/pcs	\$26.67
5	R173336	PC250-1110	Bolt -Issue P/O to Groupe Altech: P/O _____ -Cadmium plating, QQ-P16F TYPE II, CLASS II -Color: Yellow -Certificate of Conformity is	Firmed	3/14/18	2 pcs	0 pcs	2 pcs	\$87.50/pcs	\$175.00

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2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Certificat de Conformité / Certificate of Compliance



Bon de Livraison / Packing Slip

007463- 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
16-Mar-2018		Celine Schreindorfer		P0039245				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	A venir / Back Order
1	RBE350A94-3700-A-03 Rev.	RBE350A94-3700-A-03 BLACK OXIDE FINISH, MIL-C-13924C, CLASS 1	BLACK-OXIDE CH	16	16	0	0	0
2	RBE350DAMPER Rev.	RBE350DAMPER 01 -BLACK OXIDE FINISH MIL-C-13924C, CLASS 1	BLACK-OXIDE CH	6	6	0	0	0
3	RBE350A94-2708-01-15 Rev.	RBE350A94-2708-01-15 01 -OXIDE BLACK [OXIDE BLACK] MIL-C-13964C, CLASS 1 MIL-C-16173 GRADE 4	OXIDE-BLACK CH	6	6	0	0	0
4	RB AN8514-1-3 Rev.	RB AN8514-1-3 01 -OXIDE BLACK [OXIDE BLACK] FINISH MIL-C-13924C CLASS 1	OXIDE-BLACK CH	6	6	0	0	0

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Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.